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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/061,990	01/31/2002	Toshihiko Yuki	JP920000455US1	9145

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EXAMINER

WATKO, JULIE ANNE

ART UNIT	PAPER NUMBER
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2652

DATE MAILED: 02/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/061,990

Applicant(s)

YUKI ET AL.

Examiner

Julie Anne Watko

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings are objected to because Figure 6 has no key; thus, it is unclear which data line corresponds to which apparatus. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
3. Figure 7 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-3 and 7-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. Claim 1 recites the limitation "the shape of the pivot member in a plane orthogonal to its central axis of rotation is asymmetrical" in the last 2 lines. This

limitation is misdescriptive of the specification. See especially Fig. 3(b), which shows a pivot member shaped **symmetrically** with respect to vertical on the page.

b. Claim 7 recites the limitation “a center of gravity” in line 13. It is unclear whether this limitation refers to a center of gravity of the flange, a center of gravity of the sleeve, a center of gravity of the pivot member, or a center of gravity of some other part.

c. Claim 8 recites the limitation “the shape of the flange section in the plane orthogonal to the axis of the shaft is asymmetrical.” See rejection above for claim 1.

d. Claims 2-3 and 9-10 are rejected as indefinite by virtue of their dependency from indefinite claims.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-3, 4, 7-8 and 11-12 are rejected under 35 U.S.C. 102(e) as being anticipated, by Macpherson et al (US PAP No. 2003/0076633 A1).

The product by process limitations in these claims (e.g. “when the head assembly pivots are formed” in claim 2, and “machined” in claim 12) are directed to the product per se, no matter how actually made, *In re Hirao*, 190 USPQ 15 at 17 (footnote 3). See also *In re Brown*, 173 USPQ 685; *In re Luck*, 177 USPQ 523; *In re Fessman*, 180 USPQ 324; *In re Avery*, 186 USPQ 161; *In re Wertheim*, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); *In re Marosi*

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et al, 218 USPQ 289; and particularly *In re Thorpe*, 227 USPQ 964, all of which make it clear that it is the patentability of the final structure of the product “gleaned” from the process limitations or steps, which must be determined in a “product by process” claim, and not the patentability of the process limitations. Moreover, an old or obvious product produced by a new method is not a patentable product, whether claimed in “product by process” claims or not. Note that the applicant has the burden of proof in such cases, as the above case law makes clear.

As recited in claim 1, to the extent understood, Macpherson et al show a disk drive apparatus (see Fig. 1), comprising: a disk drive source 106 that drives a disk-shaped medium 108 that stores data; a head assembly 118 to which is attached a head 120 for reading data from and writing on the disk medium; a housing 104 that accommodates the disk drive source and the head assembly; wherein the head assembly is attached to the housing via a pivot member (including 114, 138 and 146, for example) so as to be able to pivot; and wherein the shape of the pivot member in a plane orthogonal to its central axis of rotation is asymmetrical (see especially the hole through which 150 fits).

As recited in claim 2, Macpherson et al show that the pivot member has an asymmetrical shape due to balance adjustment sections (the hole through which 150 fits) that adjust a balance.

As recited in claim 3, Macpherson et al show that the balance adjustment sections are formed at a part where an outer diameter of the pivot member is greatest (see 146, for example, which has the hole, through which 150 fits, formed at a part 138 where an outer diameter (see 144) is greatest).

As recited in claim 4, Macpherson et al show a disk drive apparatus (see Fig. 1), comprising: a disk enclosure (102 and 104) having a box-shaped base 102 with an aperture and a

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cover 104 that seals the aperture; a recording disk 108 that stores data and is rotated by a spindle motor 106; a head assembly 110 having a head 120 for reading data from and writing data on the recording disk and that causes that head to seek on the recording disk by pivoting about a pivot member; wherein the pivot member has a shaft (at center of 114) fixed on the base side, a sleeve 144 fixed on the head assembly side, and a bearing (part of 114 outside of shaft) mounted between the shaft and the sleeve; and wherein the sleeve has a flange section 138 that extends toward the periphery, and balance adjustment sections (see especially the hole through which 150 fits) that adjust the balance on that flange section.

As recited in claim 7, to the extent understood, Macpherson et al show a head assembly 110 that moves over a data storage medium 108 by pivoting, comprising: a pivot member (including 114 and 140) that supports the head assembly so as to be free to pivot with respect to a base on which the head assembly is mounted; a first arm 134 that extends from the pivot member on one side; a head 120 that is attached to the first arm and that reads data from and writes data on the data storage medium; a second arm 144 that extends from the pivot member on another side; a voice coil motor coil 142 supported by the second arm; wherein the pivot member has a shaft (inner part of 114) fixed on the base side, a sleeve 140 fixed on the head assembly side, and a bearing (outer part of 114) mounted between the shaft and the sleeve; and wherein the sleeve has a flange section at one end, and with regard to the flange section, the location of a center of gravity in a plane orthogonal to the axis of the shaft is eccentric with respect to the axis of the shaft (the position of the center of gravity, to the extent understood, is influenced by the position of 150, which is eccentric with respect to the shaft of 114).

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As recited in claim 8, to the extent understood, Macpherson et al show that the shape of the flange section in the plane orthogonal to the axis of the shaft is asymmetrical (see shape of 140 in Fig. 2).

As recited in claim 11, Macpherson et al show a pivot bearing 114 for supporting a head assembly 110 that moves over a data storage medium 108 so as to be able to pivot, comprising: a tubular sleeve 153 fixed on the head assembly side; a shaft (at center of 114) placed within the sleeve; a bearing (between center of 114 and sleeve 153) located between the sleeve and the shaft; and wherein the sleeve has at one end a flange section 152 extending toward the periphery, and on that flange section a depression (see shape of 152 in Fig. 2, especially planar sections) is formed located inward from the maximum diameter section of that flange section.

As recited in claim 12, Macpherson et al show that the depression is formed by a planar section (see shape of 152 in Fig. 2, especially planar sections) located inward from the maximum diameter section of the flange section.

8. If a copy of a provisional application listed on the bottom portion of the accompanying Notice of References Cited (PTO-892) form is not included with this Office action and the PTO-892 has been annotated to indicate that the copy was not readily available, it is because the copy could not be readily obtained when the Office action was mailed. Should applicant desire a copy of such a provisional application, applicant should promptly request the copy from the Office of Public Records (OPR) in accordance with 37 CFR 1.14(a)(1)(iv), paying the required fee under 37 CFR 1.19(b)(1). If a copy is ordered from OPR, the shortened statutory period for reply to this Office action will not be reset under MPEP § 710.06 unless applicant can demonstrate a substantial delay by the Office in fulfilling the order for the copy of the provisional application.

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Where the applicant has been notified on the PTO-892 that a copy of the provisional application is not readily available, the provision of MPEP § 707.05(a) that a copy of the cited reference will be automatically furnished without charge does not apply.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 5-6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Macpherson et al (US PAP No. 2003/0076633 A1) in view of Jeirapipatanakul et al (US Pat. No. 6288867 B1).

Macpherson et al show a disk drive apparatus as described above for claims 1-3, 4, 7-8 and 11-12.

As recited in claim 5, Macpherson et al are silent regarding whether the balance adjustment sections are planar sections formed on the peripheral surface of the flange section.

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Jeirapipatanakul et al teach that balance adjustment section of a disc spacer is a planar section 212 that minimizes material wastage which reduces the cost of the part (see col. 4, lines 2-31).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a planar section as a balance adjustment section of the pivot member of Macpherson et al as taught by Jeirapipatanakul et al. The rationale is as follows: one of ordinary skill in the art would have been motivated to minimize material wastage as taught by Jeirapipatanakul et al (see col. 4, lines 2-31).

As recited in claim 6, Macpherson et al are silent regarding whether the planar sections are formed in at least two places on the flange section; however, absent unexpected results, there is no invention in the duplication of existing parts known in the prior art. See In re Harza, 124 USPQ 378 (CCPA 1960).

The product by process limitations in these claims (e.g. “used when positioning the sleeve in an assembly process” in claim 6) are directed to the product per se, no matter how actually made, *In re Hirao*, 190 USPQ 15 at 17 (footnote 3). See also *In re Brown*, 173 USPQ 685; *In re Luck*, 177 USPQ 523; *In re Fessman*, 180 USPQ 324; *In re Avery*, 186 USPQ 161; *In re Wertheim*, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); *In re Marosi et al*, 218 USPQ 289; and particularly *In re Thorpe*, 227 USPQ 964, all of which make it clear that it is the patentability of the final structure of the product “gleaned” from the process limitations or steps, which must be determined in a “product by process” claim, and not the patentability of the process limitations. Moreover, an old or obvious product produced by a new method is not a

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patentable product, whether claimed in “product by process” claims or not. Note that the applicant has the burden of proof in such cases, as the above case law makes clear.

As recited in claim 9, Macpherson et al are silent regarding whether planar sections located inward from the maximum diameter section of the flange section are formed as balance adjustment sections on the peripheral surface of that flange section.

See teachings, rationale and motivations for combining teachings above for claim 5.

Allowable Subject Matter

12. Claim 10 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

13. Reasons for indicating allowable subject matter will be stated when all pending claims become clear and definite.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hoogeveen et al (US Pat. No. 4622661) show an optically readable storage disc wherein “balancing may be effected by apertures” (see abstract; see also Figs. 1 and 4). IBM (IBM TDB, Nov. 1996, US, v. 39, no. 11, p. 221-226) shows a head actuator assembly wherein a center of mass is placed between a pivot bearing and a voice coil motor (see the Figure). Baasch et al show an actuator arm assembly comprising tangential cut 68 “to ease the insertion and removal of the self-locking arm 34” (see col. 6, lines 36-39). Van Sloun (US Pat. No. 6456463 B1) show an actuator assembly comprising asymmetries (see especially 33, 42 and 44 in Fig. 3).

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15. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie Anne Watko whose telephone number is (703) 305-7742. The examiner can normally be reached on Sat & Mon until 9PM, Wed & Fri until 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Julie Anne Watko
Primary Examiner
Art Unit 2652

February 11, 2004
JAW

A handwritten signature in black ink, appearing to read 'Julie Anne Watko', with a large, sweeping flourish at the end.